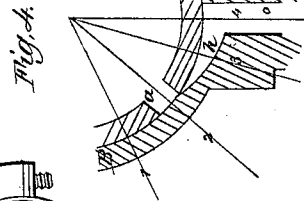
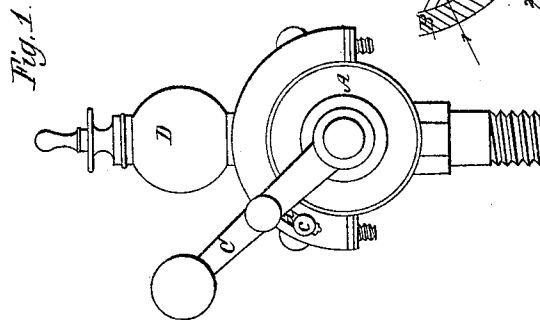
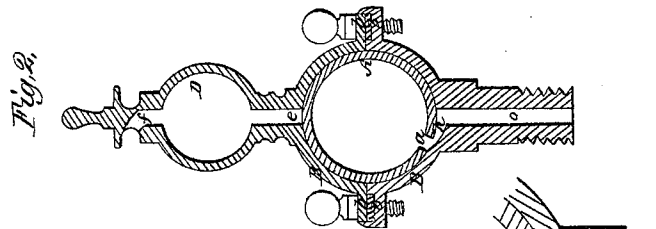
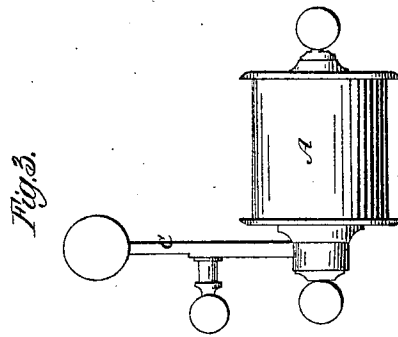


R. M. Wade,

Lubricator.

N^o 9,010.

Patented June 8, 1852.



UNITED STATES PATENT OFFICE.

ROBT. M. WADE, OF WADESVILLE, VIRGINIA.

GREASE-COCK.

Specification of Letters Patent No. 9,010, dated June 8, 1852.

To all whom it may concern:

Be it known that I, ROBERT M. WADE, of Wadesville, in Clarke county and State of Virginia, have invented a new and useful
5 Improvement in Apparatus for Greasing the Cylinders of Steam-Engines, and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, and letters
10 of reference marked thereon, making a part of this specification, in which—

Figure 1, is a front view of the entire apparatus. Fig. 2 is a vertical section taken through the center parallel to the front.
15 Fig. 3 is a side view of the rotating chamber to contain the oil, and the lever, by which it is operated. Fig. 4 is a sectional view drawn to a larger scale.

The same letters, occurring in different
20 figures indicate the same parts.

A is a hollow circular chamber to contain the oil or other lubricant and has one opening *a*, to receive and discharge at, the surface of this cylinder, in ground between
25 the two semi-circular surfaces B, B, which are bolted together with flanges *b*, *b*, forming an outer cylinder or jacket in which the chamber A rotates; C is a lever on said chamber by which it is turned either by
30 hand, or by a rod connected therewith extended to any convenient spot, and has a gage stop *c*, which can be adjusted in the slot *d*, to regulate the stroke of said lever; D is an additional globular reservoir to contain oil and may be of any desired capacity,
35 or may be dispensed with altogether.

The apparatus is intended to be screwed into the top of the steam chest or cylinder, and operates as follows:—the rotating chamber A is to be set so as to bring the opening
40 *a*, therein opposite the opening *e*, in the upper half of the outer cylinder, and then filled with oil through the opening *f*. When the oil is required to be discharged into the cylinder the chamber A is to be turned until
45 the opening *a* therein is brought down to the inclined passage *h* and discharged in any quantity in proportion to the distance it is turned over the inclined passage *h*. When
50 sufficient oil is admitted into the cylinders it may be turned back far enough for the open-

ing *a*, to leave the incline *h*, when the remainder of the oil will be retained in the chamber A for future use. By this arrangement oil can be admitted into the cylinder of
55 a steam engine, whether she be running or standing, by the engineer, without leaving his post at the tender, which (when running), would be a difficult and uncertain operation, owing to the extreme tremor of the
60 locomotive, and distance of the operator, requiring a long connecting rod to turn the cylinder A. It will be seen, that if the hole *a*, in the rotating chamber A, had to be brought over a corresponding circular hole,
65 in the lower part of the outer cylinder B, the distance for said rotating chamber to be moved, would be so small, that there would be no certainty, or regularity, in the quantity of oil admitted into the steam cylinder:
70 Whereas, by forming the inclined passages *h*, of any desirable length and of continually varying area the sweep of the rotating chamber, will be proportionately greater, and in proportion to the extent the hole *a*, is moved
75 over said inclined passage *h* more or less oil will be discharged; and the stop *c*, being so set, as to prevent a direct passage, of the oil downward, it will be discharged more gradually, consequently allowing more time for
80 the operation.

By an inspection of Fig. 4, which represents the inclined passage *h* drawn to a larger scale it will be perceived that it is so constructed that the area of its transverse
85 section varies from the full size of *a* up to a mere line or slit and this area regulates the effective size of the discharge opening—a turn of the cylinder through a considerable angle will vary the size of the outlet only a
90 small quantity—and hence the amount of flow may be regulated with the greatest nicety. Now, when cylinder A is turned till the center of discharge opening *a* is coincident with line 2 a very small quantity of oil
95 will flow into inclined opening *h*, and when it is coincident with line 1 the flow of the oil will be entirely cut off. When coincident with line 3 a larger quantity will escape than when in the first named position. And when
100 in a line with the opening *o*, or line 4 the maximum flow of oil will take place.

Having thus described my invention what I claim therein as new and desire to secure by patent is—

5 The inclined discharge passage *h* of varying area, constructed, arranged and operating, with respect to and in connection with the hollow cylinder and its aperture *a*, in the manner and for the purpose herein set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses. 10

ROBT. M. WADE.

Witnesses:

A. E. H. JOHNSON,

WM. M. SMITH.